

Claims

We claim:

1. An isolated polynucleotide comprising a sequence selected from the group consisting of: SEQ ID NO: 1-131.

2. An isolated polynucleotide comprising a sequence selected from the group consisting of:

- (a) complements of a sequence of SEQ ID NOS: 1-131;
- (b) reverse complements of a sequence of SEQ ID NOS: 1-131; and
- (c) reverse sequences of the sequences recited in SEQ ID NOS: 1-131.

3. An isolated polynucleotide comprising a sequence selected from the group consisting of:

- (a) sequences having at least 75% identity to a sequence of SEQ ID NO: 1-131;
- (b) sequences having at least 90% identity to sequence of SEQ ID NO: 1-131;
- (c) sequences having at least 95% identity to a sequence of SEQ ID NO: 1-131;
- (d) nucleotide sequences that hybridize to a sequence of SEQ ID NO: 1-131 above under stringent hybridization conditions; and
- (e) sequences that are degeneratively equivalent to a sequence of SEQ ID NO: 1-131, wherein the isolated polynucleotide encodes a polypeptide having substantially the same functional properties as a polypeptide of SEQ ID NO: 132-262.

4. An isolated polynucleotide comprising a sequence selected from the group consisting of:

- (a) nucleotide sequences that are 200-mers of a sequence of SEQ ID NO: 1-131;
- (b) nucleotide sequences that are 100-mers of a sequence of SEQ ID NO: 1-131;
- (c) nucleotide sequences that are 40-mers of a sequence of SEQ ID NO: 1-131; and
- (d) nucleotide sequences that are 20-mers of a sequence of SEQ ID NO: 1-131.

5. An oligonucleotide comprising at least 20 contiguous residues complementary to 20 contiguous residues of a nucleotide sequence of SEQ ID NO: 1-131.

6. A genetic construct comprising an isolated polynucleotide of any one of claims 1-4.

7. A host cell transformed with a genetic construct of claim 6.

8. An isolated polypeptide encoded by a polynucleotide of claim 1.

9. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of: SEQ ID NO: 132-262.

10. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

(a) sequences having at least 75% identity to a sequence of SEQ ID NO: 132-262;

(b) sequences having at least 90% identity to a sequence of SEQ ID NO: 132-262;

and

(c) sequences having at least 95% identity to a sequence of SEQ ID NO: 132-262,

wherein the isolated polypeptide has substantially the same functional properties as a polypeptide of SEQ ID NO: 132-262.

11. An isolated polynucleotide encoding a polypeptide of claim 10.

12. An isolated polypeptide comprising at least a functional portion of an amino acid sequence of SEQ ID NO: 132-262.

13. A composition comprising a polypeptide according to any one of claims 9 and 10 and at least one component selected from the group consisting of: physiologically acceptable carriers and immunostimulants.

14. A composition comprising a polynucleotide according to claim 1 and at least one component selected from the group consisting of pharmaceutically acceptable carriers and immunostimulants.

15. A method for treating a disorder in a mammal comprising administering a composition according to claim 13.

16. A method for treating a disorder in a mammal comprising administering a composition according to claim 14.

17. A method for modifying mammary gland function, structure or composition in an organism, comprising transforming the organism with a genetic construct according to claim 6.

18. A method for modifying mammary gland function, or milk composition in an organism, comprising administering a composition according to claim 13.

19. A method for detecting the presence of mammary gland tissue in a biological sample, comprising:

- (a) contacting the biological sample with an oligonucleotide according to claim 5;
- (b) detecting in the sample the presence of a polynucleotide that hybridizes to the oligonucleotide.

20. A diagnostic kit comprising at least one oligonucleotide according to claim 5.

21. A transgenic organism comprising a host cell according to claim 7.